FIG. 1

100

Specify one or more states and state transitions for
components or interactions between components,
wherein at least one composite state transition is specified

110

Generate a notification corresponding to a specified state
or state transition upon the occurrence of a specified state
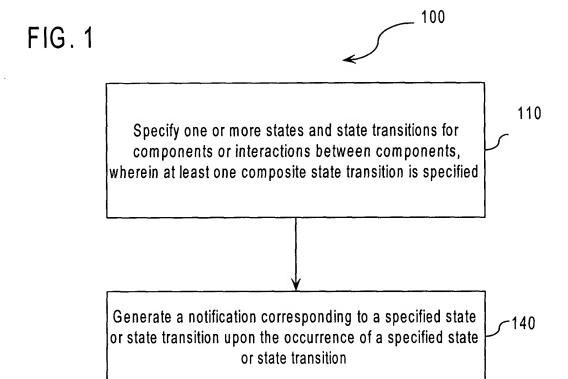or state transition

140

Title: Approaches for Capturing Illegal and Undesired Behavior in
Network Components and Component Interactions
Inventor(s): Petre Dini, et al.
Serial No.: NYA
Docket No. 50325-0780

FIG. 2

Title: Approaches for Capturing Illegal and Undesired Behavior in
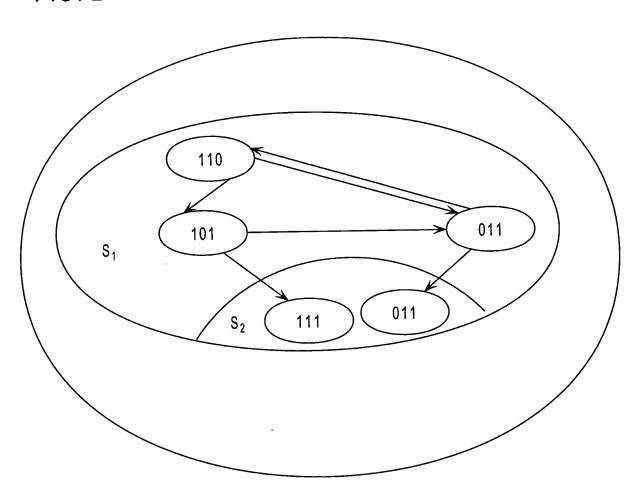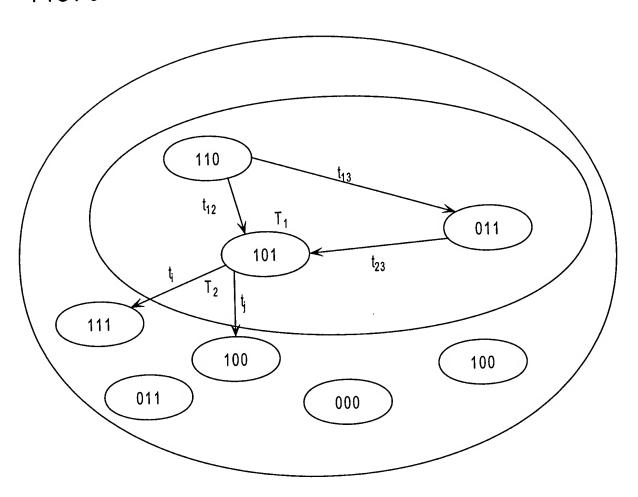Network Components and Component Interactions
Inventor(s): Petre Dini, et al.
Serial No.: NYA
Docket No. 50325-0780

FIG. 3

FIG. 4

400

Specify one or more states and state transitions for components or interactions between components, wherein at least one composite state transition is specified — 110

Detect whether a state or state transition has occurred — 420

Nothing to Report No Notification Generated — 470

No

Yes

Generate a notification corresponding to the state or state transition that occurred — 140

Report the notification to a network management system — 450

Adjust one or more network components so that the occurrence of the specified state or state transition ceases — 460

Title: Approaches for Capturing Illegal and Undesired Behavior in
Network Components and Component Interactions
Inventor(s): Petre Dini, et al.
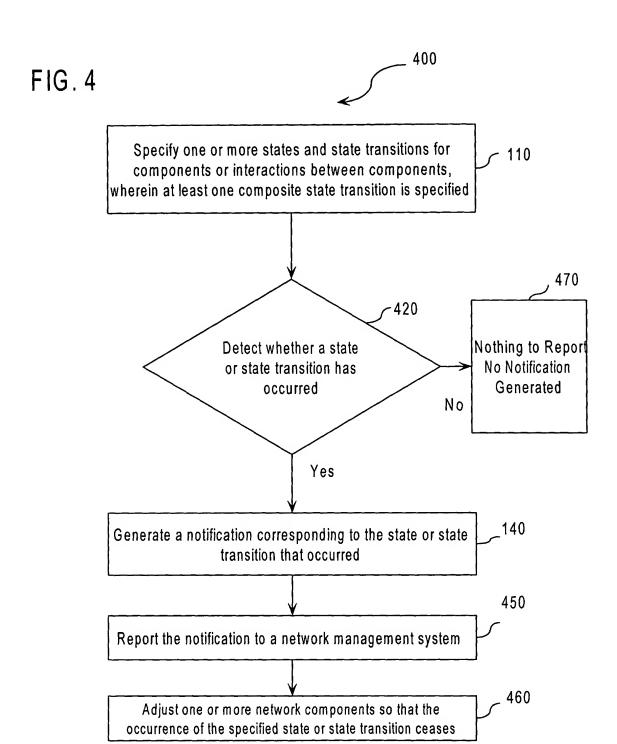Serial No.: NYA
Docket No. 50325-0780

FIG. 5

INTERNET

500

EDGE ROUTER 510

SWITCH 508

EDGE ROUTER 506

CORE ROUTER 512

501

PC 504

WORKSTATION 505

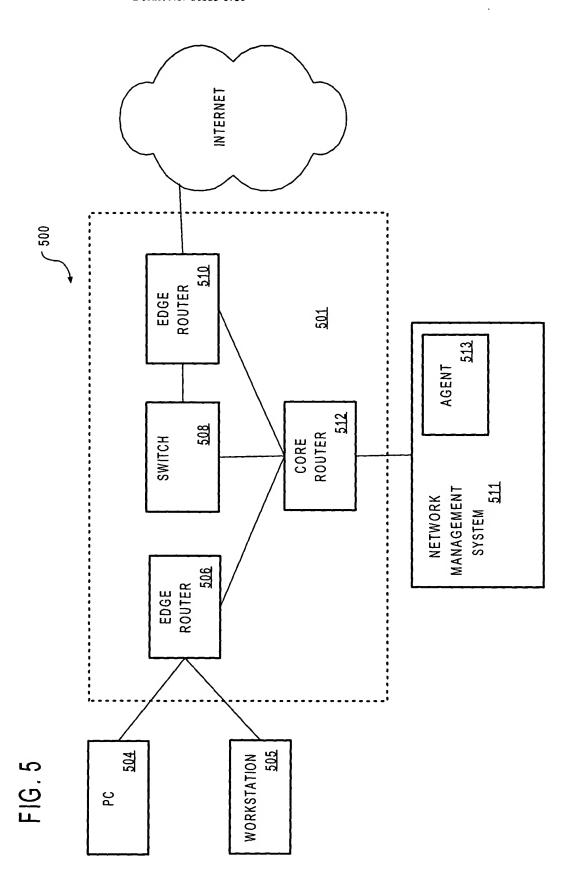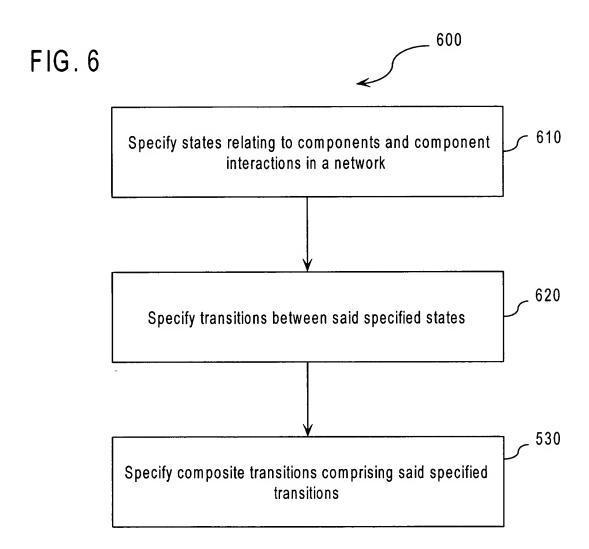NETWORK MANAGEMENT SYSTEM 511

AGENT 513

Title: Approaches for Capturing Illegal and Undesired Behavior in
Network Components and Component Interactions
Inventor(s): Petre Dini, et al.
Serial No.: NYA
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FIG. 6

600

```
┌──────────────────────────────────────────────────┐
│                                                    │  ⌐ 610
│  Specify states relating to components and component │
│            interactions in a network               │
│                                                    │
└──────────────────────────────────────────────────┘
                         │
                         ▼
┌──────────────────────────────────────────────────┐
│                                                    │  ⌐ 620
│      Specify transitions between said specified states │
│                                                    │
└──────────────────────────────────────────────────┘
                         │
                         ▼
┌──────────────────────────────────────────────────┐
│                                                    │  ⌐ 530
│  Specify composite transitions comprising said specified │
│                  transitions                        │
│                                                    │
└──────────────────────────────────────────────────┘
```

Title: Approaches for Capturing Illegal and Undesired Behavior in
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Serial No.: NYA
Docket No. 50325-0780

FIG. 7